

REMARKS

This amendment is in response to the Office Action of April 7, 2004.

Claims 1 through 36 are currently pending in the application.

Claims 1, 5 through 16, 18 and 34-36 have been amended herein.

The Examiner notes that inconsistencies exist between the clean copy of the claims filed on November 18, 2002, and the concurrently filed marked-up copy of the claims. Specifically, minor revisions shown in the clean copy of the claims were not correspondingly marked in the marked-up copy of the claims. The subsequent Office Action dated July 17, 2003, was directed to the marked-up claims. The Amendment filed in response to that Office Action, dated September 22, 2003, still reflected inconsistencies due to the earlier revisions.

Applicants assert that the claims presented herein, incorporating only the changes outlined in this section, are equivalent to the amended claims presented in the Amendment dated September 22, 2003. Accordingly, inconsistencies that existed between the amended claims of the Amendment dated November 18, 2002, and the un-amended claims of the Amendment dated September 22, 2003, are explained herein. In each case, the inconsistencies reflect minor grammatical changes; no new matter was added.

In claim 1, the term "being" was replaced by the phrase "has been." In claim 5, the term "being" was replaced by the phrase "have been." And, in claim 35, the term "being" was replaced by the phrase "have been."

Applicants submit that the claims presented herein, incorporating only the changes specified supra, are equivalent in content to the amended claims examined by the Examiner in the Amendment dated September 22, 2003, and that each change made to a claim during and after the November 18, 2002 Amendment is now documented in either this Amendment or the Amendment filed on September 22, 2003.

35 U.S.C. § 112 Claim Rejections

Claims 1 through 4, 6 through 16, 18 and 34 through 36 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants have amended the claimed invention as suggested by the Examiner for the presently claimed invention to particularly point out and distinctly claim the subject matter of the invention to comply with the provisions of 35 U.S.C. § 112. Therefore, presently amended claims 1 through 4, 6 through 16, 18 and 34 through 36 are allowable under the provisions of 35 U.S.C. § 112.

With respect to claim 1, the Examiner asserts that the phrase “said location” lacks sufficient antecedent basis. Accordingly, claim 1 has been amended. The phrase “said location” has been replaced with the phrase “said at least first position” to ensure consistency within the claim. No new matter has been added. Applicants respectfully submit that independent claim 1 is allowable under 35 U.S.C. § 112, second paragraph, and that dependent claims 2 through 4 are likewise allowable in depending on claim 1.

With respect to claim 18, the Examiner asserts that the phrase “the side upon which the second vacant position is located” lacks sufficient antecedent basis. Accordingly, claim 18 has been amended. The claim now reads that the first and the second vacant positions “are on opposing sides of the substrate.” No new matter has been added. Applicants respectfully submit that dependent claim 18 is allowable under 35 U.S.C. § 112, second paragraph.

With respect to claim 35, Applicants respectfully request clarification of the grounds for rejection from the Examiner. The Examiner states that the phrase “the side of the substrate which is opposite the side upon which the second vacant position is located” lacks sufficient antecedent basis. Applicants note that the disputed phrase is not contained within claim 35. Applicants assume, however, that the Examiner meant to refer to claim 36, which does include the disputed language. As such, Applicants submit that independent claim 35 is allowable under 35 U.S.C. § 112, second paragraph.

Assuming that the Examiner meant to refer to claim 36, the asserted insufficient antecedent basis has been remedied through an amendment of claim 36. The claim now reads that the first and the second vacant predetermined configuration positions “are located on opposing sides of the substrate.” No new matter has been added. Applicants respectfully submit that dependent claim 36 is allowable under 35 U.S.C. § 112, second paragraph.

With respect to claim 16, the Examiner asserts that the claim is incomplete because it “omit[s] essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.” The omitted structural cooperative relationships are those between claims 16 and claims 4, according to the Examiner. Applicants note that the omitted relationships are the result of a mistake in the labeled dependency of dependent claims 6 through 16. Each of claims 6 through 16 originally purported to be dependent upon dependent claim 4. However, this is in error. Claims 6 through 16 are actually dependent upon independent claim 5, as supported by the Specification of the present application. Accordingly, the dependency of claims 6 through 16 has been modified. Such modification results in claim 16 depending upon claim 5. Claim 16 has been further amended to clarify the role of the adaptor and to establish the omitted relationships showing antecedent basis for claim 16. No new matter has been added as a result of these modifications. Applicants respectfully submit that claims 6 through 16 are each allowable under 35 U.S.C. § 112, second paragraph.

With respect to claim 34, the Examiner asserts that the claim is incomplete because it omits necessary relationships with claim 23, upon which claim 34 depends. Accordingly, claim 34 has been amended. Claim 34 incorporates the phrases “having a configuration” and “to allow connection of” to both clarify the role of the adaptor and to establish the omitted relationships showing antecedent basis for claim 34. No new matter has been added. Applicants submit that claim 34 is allowable under 35 U.S.C. § 112, second paragraph.

Accordingly, Applicants respectfully submit that claims 1 through 4, 6 through 16, 18 and 34 through 36 are in condition for allowance under 35 U.S.C. § 112, second paragraph.

35 U.S.C. § 102(e) Anticipation Rejections

Anticipation Rejection Based on Lin (U.S. Patent 6,002,178)

Claims 1 through 10, 12, 14, 16 through 28 and 34 through 36 are rejected under 35 U.S.C. § 102(e) as being anticipated by Lin (U.S. Patent 6,002,178).

Applicants assert that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Verdegaal Brothers v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The

identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

A rejection under 35 U.S.C § 102(e) further requires that the referenced prior art antedate the date of invention claimed in the present application.

Lin (U.S. Patent 6,002,178) fails to properly antedate the claimed invention. The effective reference date of Lin is its U.S. filing date, November 12, 1997. The present application was filed on December 28, 2001 and is a divisional of application Serial No. 09/102,224, filed June 22, 1998, now United States Patent 6,395,565, issued May 28, 2002, which is a continuation of application Serial No. 08/614,301, filed March 12, 1996, now United States Patent 5,807,762, issued September 15, 1998. (Specification, ¶ [0001]). Because there has existed continuity of disclosure, prosecution, and inventorship, the present application claims priority from an effective filing date of March 12, 1996, twenty months prior to Lin.

For the foregoing reason, Lin is not a valid prior art reference against the present application. As such, Applicants respectfully submit that claims 1 through 10, 12, 14, 16 through 28 and 34 through 36 are allowable over Lin under 35 U.S.C. § 102(e).

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on Lin (U.S. Patent 6,002,178)

Claims 11, 15, 29, 30 and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin (U.S. Patent No. 6,002,178). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants assert that because Lin is not a valid prior art reference, as described supra, claims 11, 15, 29, 30 and 33 are allowable over Lin under 35 U.S.C. § 103(a).

Obviousness Rejection Based on Lin (U.S. Patent 6,002,178) as applied to claims 4 and 23, and further in combination with Falcone (U.S. Patent 5,836,071)

Claims 13, 31 and 32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin (U.S. Patent 6,002,178) as applied to claims 4 and 23, and further in combination with

Falcone (U.S. Patent 5,836,071). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants submit that Lin is not a valid prior art reference, as described supra. Furthermore, Falcone, filed on December 26, 1996, does not antedate the current application's claimed priority date of March 12, 1996; hence, Falcone is also not a valid prior art reference. Therefore, Applicants respectfully submit that claims 13, 31 and 32 are allowable over Lin in view of Falcone under 35 U.S.C. § 103(a).

In summary, Applicants submit that claims 1 through 36 are clearly allowable over the cited prior art.

Applicants request the allowance of claims 1 through 36 and the case passed for issue.

Respectfully submitted,



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